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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,070	11/17/2003	Dietmar Wenzel	L&L-I0259	3305

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EXAMINER	
ODOM, CURTIS B	
ART UNIT	**PAPER NUMBER**
2611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/715,070	WENZEL ET AL.
	Examiner	Art Unit
	Curtis B. Odom	2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16-21* is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4-9, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samuels et al. (previously cited in Office Action 1/12/2007) in view of Posti et al. (previously cited in Office Action 1/12/2007).

Regarding claim 1, Regarding claim 1, Samuels discloses a device (Fig. 2) for monitoring an output power of a radio, the device comprising:

at least one radio-frequency module (Fig. 2, block 25, page 8, lines 4-11) for converting baseband I and Q transmission signals having scaled signal amplitudes (as described on page 6, lines 6-28) to radio-frequency signals and for amplifying the radio-frequency signals in a

variable gain amplifier (see Fig. 2, block 24, page 9, lines 15-24) the radio-frequency module including a variable gain amplifier having a controllable gain (see page 9, lines 15-24);

a scaling unit (see Fig. 2, block 21, page 6, lines 6-28) for varying the signal magnitudes of the baseband I and Q transmission signals based on control signals output from a controller (see Fig. 2, block 9); and

a controller (Fig. 2, block 9) for controlling the scaling unit and for synchronizing the dynamic range of the circuit (see page 11, lines 1-4) by synchronizing the varying of the signal amplitudes (see page 6, lines 6-28) of the baseband transmission signals by the scaling unit in the order of 12dBs with a variation of the gain of the power amplifier (see column 9, lines 19-24) in the order of 45 to 50dBs when raising or reducing an output power before transmitting a burst so that the dynamic range of the circuit is between 57 to 62dBs (see column 11, lines 1-4).

Samuels et al. does not disclose an analog power control device for controlling the power amplifier, the analog power control device being separate from the controller.

However, Posti et al. discloses a device for monitoring an output power of a radio (see Fig. 2a) including a variable gain amplifier having a controllable gain (see Fig. 2a, element 144 sections 0058-0059), and a scaling unit (see Fig. 2a, elements 102, 104, and 106, section 0052) for varying the signal magnitudes of the baseband I and Q transmission signals based on control signals output from a controller (see Fig. 2a, block 110), wherein the controller (section 0052) controls the scaling unit. Posti et al. further discloses a comparator (see Fig. 2a, element 138) representing an analog control device for providing a control signal to the gain amplifier (see sections 0058-0059), wherein the comparator is separate from the controller. Therefore, it would have been obvious to one skilled in the art to modify the device of Samuels et al. with the

separate controller of Posti et al. since Posti et al. states power control of transmitter power can control resulting interference for neighboring devices (see section 0019).

Regarding claim 4, Samuels discloses the scaling is performed in the QPSK baseband module which produces I and Q baseband signals (see page 6, lines 6-28).

Regarding claim 5, Samuels discloses the baseband transmission signals include an in-phase signal and a quadrature signal (see page 6, lines 6-28).

Regarding claim 6, Posti et al. discloses a comparator (see Fig. 2a, element 138) representing an analog control device for providing a gain control signal to the gain amplifier (see sections 0058-0059). It would have been obvious to include this feature since Posti et al. states power control of transmitter power can control resulting interference for neighboring devices (see section 0019).

Regarding claim 7, Posti et al. further discloses the analog power control device (comparator) is supplied with a nominal value represented by an analog reference signal of a current transmission power (see section 0058);and

the power control device readjusts the gain (see section 0059) of the amplifier such that an actual output transmission power in each case corresponds to the analog reference value of the transmission power being supplied to the power control device (comparator) as described in section 0058. It would have been obvious to include this feature since Posti et al. states power control of transmitter power can control resulting interference for neighboring devices (see section 0019).

Regarding claim 8, Samuels discloses determining an actual current transmission power (see page 10, lines 19-24) and evaluating a variation (fraction) of the transmission power by evaluating the ratio of reference signal power to existing signal power (see page 10, lines 24-28).

Regarding claim 9, Posti et al. further discloses a power ramp generator for producing continuous switching-on and switching off ramps for a digital reference value of a transmission power (see section 0061); the analog power control device (comparator) is supplied with the nominal value represented by an analog reference signal (which is the digital reference signal) of the transmission power (see section 0058); and the power control device readjusts the gain (see section 0059) of the amplifier such that an actual output transmission power in each case corresponds to the analog reference value of the transmission power being supplied to the power control device (comparator) as described in section 0058. It would have been obvious to include this feature since Posti et al. states power control of transmitter power can control resulting interference for neighboring devices (see section 0019).

Regarding claim 14, Samuels discloses a mobile radio station (Fig. 2) for monitoring an output power of a radio, the device comprising:

at least one radio-frequency module (Fig. 2, block 25, page 8, lines 4-11) for converting baseband I and Q transmission signals having scaled signal amplitudes (as described on page 6, lines 6-28) to radio-frequency signals and for amplifying the radio-frequency signals in a variable gain amplifier (see Fig. 2, block 24, page 9, lines 15-24) the radio-frequency module including a variable gain amplifier having a controllable gain (see page 9, lines 15-24);

a scaling unit (see Fig. 2, block 21, page 6, lines 6-28) for varying the signal magnitudes of the baseband I and Q transmission signals based on control signals output from a controller (see Fig. 2, block 9); and

a controller (Fig. 2, block 9) for controlling the scaling unit and for synchronizing the dynamic range of the circuit (see page 11, lines 1-4) by synchronizing the varying of the signal amplitudes (see page 6, lines 6-28) of the baseband transmission signals by the scaling unit in the order of 12dBs with a variation of the gain of the power amplifier (see column 9, lines 19-24) in the order of 45 to 50dBs when raising or reducing an output power before transmitting a burst so that the dynamic range of the circuit is between 57 to 62dBs (see column 11, lines 1-4).

Samuels et al. does not disclose an analog power control device for controlling the power amplifier, the analog power control device being separate from the controller.

However, Posti et al. discloses a device for monitoring an output power of a radio (see Fig. 2a) including a variable gain amplifier having a controllable gain (see Fig. 2a, element 144 sections 0058-0059), and a scaling unit (see Fig. 2a, elements 102, 104, and 106, section 0052) for varying the signal magnitudes of the baseband I and Q transmission signals based on control signals output from a controller (see Fig. 2a, block 110), wherein the controller (section 0052) controls the scaling unit. Posti et al. further discloses a comparator (see Fig. 2a, element 138) representing an analog control device for providing a control signal to the gain amplifier (see sections 0058-0059), wherein the comparator is separate from the controller. Therefore, it would have been obvious to one skilled in the art to modify the device of Samuels et al. with the separate controller of Posti et al. since Posti et al. states power control of transmitter power can control resulting interference for neighboring devices (see section 0019).

Regarding claim 15, Samuels discloses the data signal (burst) is transmitted with the GSM standard (see page 1, lines 22-26).

4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samuels et al. (previously cited in Office Action 1/12/2007) in view of Posti et al. (previously cited in Office Action 1/12/2007) as applied to claim 1, and in further view of McGowan (previously cited in Office Action 1/12/2007).

Regarding claims 2 and 3, Samuels discloses scaling the magnitudes (amplitudes) of both the I and Q baseband signals (see page 6, lines 6-28), including a digital/analog converter (see Fig. 1, block 6) for converting both the I and Q baseband signals (see page 7, lines 1-7), wherein the scaling (see Fig. 1, block 21) takes place upstream from the digital/analog converter (see Fig. 1, block 6). Samuels and Posti et al. do not disclose the scaling of the amplitudes takes place by multiplying the I and Q baseband signals.

However, McGowan discloses scaling I and Q baseband signals with instantaneous gain (amplitude) values using multipliers (see Fig. 2, block 212, section 0040) to reduce power peaks and create a baseband signal with an average output power consistent with the average input power. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the scaling of the magnitudes of Samuels and Posti et al. using multipliers as disclosed by McGowan since McGowan states the scaling fully compensates for reduction in average power of the baseband signals (see section 0040, page 4).

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Samuels et al. (previously cited in Office Action 1/12/2007) in view of Posti et al. (previously cited in Office

Action 1/12/2007) as applied to claim 9, and in further view of Mohindra (U. S. Patent No. 7, 130, 595)

Regarding claim 10, Samuels discloses the scaling is performed in the QPSK baseband module which produces I and Q baseband signals (see page 6, lines 6-28). Samuels and Posti et al. do not disclose the ramp generator is included in the baseband module.

However, Mohindra discloses power ramping performed in a baseband module in a transmitter (see column 2, lines 33-38 and column 5, lines 16-22). Therefore, it would have been obvious to one skilled in the art to perform ramping at the baseband stage in Samuels et al. and Posti et al. as described by Mohindra since Mohindra states ramping at the baseband stage prevents frequency glitches and transients when the actual signal transmission begins (see column 5, lines 26-30).

6. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samuels et al. (previously cited in Office Action 1/12/2007) in view of Posti et al. (previously cited in Office Action 1/12/2007) as applied to claim 1, and in further view of Schwent et al. (US 2002/0168025).

Regarding claims 11-13, Samuels and Posti et al. do not disclose the scaling unit includes a memory for storing a sequence of rising or falling amplitude values; and the sequence of amplitude values produces a rising or falling profile for the signal amplitudes of the baseband transmission signals, wherein the scaling unit is configured for obtaining trigger signals for initiating the rising or falling profile for the signal amplitudes of the baseband transmission signals, wherein during a switching-on ramp, the scaling unit obtains a trigger signal at a chosen time interval after a beginning of the switching-on ramp; and during a switching-off ramp, the

scaling unit obtains a trigger signal at a chosen time interval after a beginning of the switching-off ramp.

However, Schwent discloses a scaling unit (see Fig. 7, block 712) including a table for storing ramping values (see section 0058) of rising and falling amplitudes as shown in Fig. 8; and the sequence of ramp values produces a rising (ramping up) or falling (see sections 0063-0065) patterns to adjust signal amplitudes of the baseband signal modulation (see section 0088), wherein the scaling is configured for obtaining a DMCS signal as a trigger signal (see section 0061) for initiating the ramping-up (rising) or ramping-down (falling) profile pattern to adjust the modulation signals (see sections 0061-0065), wherein during a switching-on ramp-up, the scaling unit obtains a trigger signal at a chosen time interval (RAMP_DLY) after a beginning of the switching-on ramp-up after EST_DLY (se section 0063); and during a switching-off ramp, the scaling unit obtains a trigger signal at a chosen time interval (RAMP_DN_DLY) after a beginning of the switching-off ramp after DIV_DLY (see Fig. 8, section 0065).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the scaling unit of Samuels and Posti et al. with the scaling unit of Schwent et al. since Samuels discloses scaling the baseband signals can reduce the weight, size, and current consumption of transmitters (see column 3, lines 8-14).

Allowable Subject Matter

7. Claims 16-21 are allowable over prior art references.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Curtis Odom
July 9, 2007